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QWEST COMMUNICATIONS INTERNATIONAL INC  
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EXAMINER

SHANG, ANNAN Q

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/514,033

**Applicant(s)**

BRODIGAN ET AL.

**Examiner**

Annan Q. Shang

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2004.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-11 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 11/15/04 have been fully considered but they are not persuasive.

With respect to claim 1, Applicant recites a method of the claimed invention and argues that, "Hendricks fails to suggest the invention. Hendricks describes a network manager for cable television system head ends. Hendricks relates to managing and coordinating the reception of various programming and control signals at a head end. Hendricks does mention the accommodation of system services including video on demand and generation of standard and customs menus. However, Hendricks fails to suggest the claimed invention." It is to be appreciated that claim 1 specially recites sending the private data packet in addition to the broadcast video from the service provider, establishing the impulse pay-per-view communication path between the set top box and the service provider, among other related limitations. Hendricks fails to suggest these features."

In response, Examiner completely disagrees. As clearly discussed in the last office action, which is also repeated below, Hendricks discloses Head end (HE) 208 "a broadband digital terminal" which receives various interactive program(s) "video" and interactive Custom Menus "private data packet" which includes Interactive Menus data "application interface information" from Operation Center (OC) 202 "a service provider" having an address (channel number(s)) and uses a data network such as telephone, ATM, etc., to establishes a virtual channel (col. 34, line 61-col. 35, line 5)

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“communication path” between OC 202, HE-208 and set top terminal(s) (STT(s)) 220 via the bidirectional fiber/coax link and terrestrial link 218, to provide customized interactive programming or personalized interactive programming over the data path, providing impulse pay-per-view (IPPV), NVOD, VOD, etc., services between OC 202, a HE 208 and a specific STT(s) 220. Note that in response to a user’s interaction to the interactive program, the OC 202 sends specific or custom menus or data packets “private data packet” to a specific STT 220, in real-time to provide the interactive services and establishes the necessary specific virtual channel path(s) to communicate data and control signals, between OC 202, HE 208 and STT(s) 220, to meet the user’s request. Furthermore figures 1-3a and 6a-8, shows the arrangements of the claimed (independent claims 1 and 5) invention, which permits the user to receive the customized interactive programming (IPPV/VOD and Menus).

Applicant further argues that, “In Hendricks, the impulse connection is from the set top terminal to the head end. There is no suggestion of the level of interactive programming contemplated by the invention. This is evidenced by Hendricks simplification of incoming ATM feeds 226 in Figure 1.”

In response, Examiner disagrees. Applicant arguments, such as “the level of interactive programming” are not recited in Applicant’s disclosure or claims. Hendricks abstract and disclosure teaches a delivering system based on a user’s interaction to an interactive program(s) and provides interactive services, in response to a user’s request, see col. 6, line 66-col. 7, line 28 which discloses that, “the program delivery system 200 transports digital signals or analog signals to the cable headend 208 via

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satellite 206 or terrestrial link 218...,” and where the terrestrial link 218 includes ATM networks, local feeds and other signals. Furthermore the HE 208 communicates to OC 202, which customizes menus and programs to a specific STT 220, based on the user interaction, in real-time, to the interactive program(s) and the interactive menus. Note further that the delivery of the requested interactive program can be spooled directly from OC 202 via HE 208 to the STT 220 over a specific channel or virtual channel and to avoid delays in delivering the program(s), HE 208 upon a request from the user via STT 220, may play a few minutes of the program before receiving the rest of the requested program from OC 202 in real-time (col. 34, line 60-col. 35, line 20).

Applicant further argues that, “There is no suggestion of the specifically claimed private data packet. With regard to establishing the impulse pay-per-view communication path, the Examiner makes reference to column 24, lines 12-33. This portion of Hendricks does discuss IPPV/VOD. However, claim 1 recites the specific combination involving the use of a private data packet and establishing of an impulse pay-per-view communication path between the service provider and the set top box.”

In response, Examiner disagrees. Hendricks does teach sending data packets within the interactive programming services as discussed above, and further teaches establishing a virtual channel path, which enables the OC 202, a HE 208 and a specific STT 220 to establish a communication path for the delivering of the interactive programming and menus based on requests made interactively by the STT 220. Hence, Hendricks teaches the claimed sending a “private data packet” and the other elements as claimed, with respect to independent claims 1 and 5.

Examiner maintains the U.S.C. 102(e) rejection using Hendricks is proper, meets all the claimed limitations of independent claims 1 and 5, maintained and repeated below. This office action is made FINAL.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-10, are rejected under 35 U.S.C. 102(e) as being anticipated by **Hendricks et al (6,201,536)**.

As to claim 1, note the **Hendricks et al** reference figures 1, 7 and 8, disclose a cable television system headend capable of monitoring and managing headend components and set top terminals (STT) and further disclose a method for personalized interactive programming over a data path, the data path extending between the service provider (Operation Center (OC) 202) being connected to a data network (telephone, ATM, etc., network) and having an address (channel number(s)), the method comprising:

the claimed "establishing a communication path between a broadband digital terminal and the set top box..." is met by Headend (HE) 208 (figs. 1, 7, 8 and col. 6, line 56-col. 7, line 19), note that Operation Center (OC) 202 packs programs and interactive Menus and transmits, via satellite 206 or terrestrial link 218 and fiber/coax link, to

Set-top terminals (STTs) 220 via HE 208, and upon receipt of a request for IPPV/VOD (col. 18, lines 1-29), HE 208 "broadband digital terminal" which acts as a network manager 214 (col. 8, line 65-col. 9, line 7) by receiving information from STTs 220 and passing it on to OC 202, establishes a virtual channel (col. 34, line 61-col. 35, line 5) path "communication path" via bi-directional fiber/coax link between HE 208 and STTs 220 and terrestrial link 218 between HE 208 and OC 202, that enables rapidly generating of interactive Custom Menus (col. 15, lines 9-43 and col. 29, line 62-col. 30, line 30) specific to each STT 220 for the IPPV/VOD program to be received in less than 2 milliseconds (col. 18, line 11), note that HE 208 is connected to a telephone network 244 or 246, ATM network 226, etc. (figs 7 and 8) "data network" and OC 202 "service provider" broadcasts video through HE 208 and STT 220.

the claimed "sending a private data packet in addition to the broadcast video from the service provider, over the network and through the broadband digital terminal..." is met by OC 202 (col. 8, lines 8-34), note upon a user interaction to the interactive program and interactive menus that OC 202 packs programs to different categories and rapidly generates Custom Menus "private data packet" specific to each STT 220 and transmits Custom Menus in addition to video program data to each STT 220 via satellite 206 or terrestrial link 218 "the network" via HE 208 (col. 8, lines 4-54), note that the Custom Menus includes interactive Menus data "application interface information" (col. 15, lines 9-43 and line 51-col. 16, line 10) and channel number(s) "address" to various service provider(s) (col. 8, lines 30-43), which are packed at OC 202 and transmitted to each STT 220 via HE 208; note that OC 202 and HE 208

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maintains address of each STT 220 (col. 28, lines 32-45 and col. 29, lines 26-40) and HE 208 further receives and processes requests from each specific STT 220 to met specific demands of each STTs 220, based on the requests received; and

HE 208 establishes an impulse pay-per-view communication path (col. 24, lines 12-33) between STT 220 and OC 202 based upon the address of STT 220 to allow interactive programming using rapidly created Custom Menus and the control program received from OC 202 via HE 208 to personalize the broadcast programming (col. 15, lines 9-43, line 51-col. 16, line 10 and col. 18, lines 1-43).

As to claim 2, Hendricks further discloses a method for providing personalized interactive programming over a data where sending the Custom Menus data packet is performed by inserting the Custom Menus data packet by inserting the Custom Menus data packet between frames of a video transmission (col. 15, lines 19-43 and col. 26, lines 6-23).

As to claim 3, Hendricks further discloses where the IPPV/VOD programs "video transmission" is prerecorded programming that is transmitted on demand (col. 18, lines 17-29).

As to claim 4, Hendricks further discloses where the video transmission is real-time programming (col. 17, lines 48-59 and col. 18, lines 1-16).

As to claim 5, note the **Hendricks et al** reference figures 1, 7 and 8, disclose a cable television system headend capable of monitoring and managing headend components and set top terminals (STT) and further disclose an interactive video/data



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system (200) for interacting with destination address of a network, the system comprising:

the claimed “a broadcast source at the destination address for transmitting a private data packet over a private virtual channel on the network...” is met by OC 202 (figs. 1, 7, 8, col. 6, line 56-col. 7, line 19 and col. 8, lines 8-34) note that Operation Center (OC) 202 packs programs and interactive Menus and transmits, via satellite 206 or terrestrial link 218 and fiber/coax link, to Set-top terminals (STTs) 220 via HE 208, and upon receipt of a request for IPPV/VOD (col. 18, lines 1-29), HE 208 “broadband digital terminal” which acts as a network manager 214 (col. 8, line 65-col. 9, line 7) by receiving information from STTs 220 and passing it on to OC 202, establishes a virtual channel on the network (col. 34, line 61-col. 35, line 5) path “communication path” via bi-directional fiber/coax link between HE 208 and STTs 220 and terrestrial link 218 between HE 208 and OC 202, that enables rapidly generating of interactive Custom Menus “private data packet” (col. 15, lines 9-43 and col. 29, line 62-col. 30, line 30) specific to each STT 220 for the IPPV/VOD program in less than 2 milliseconds (col. 18, line 11), note that the Custom Menu includes interactive Menu data “application interface information” (col. 15, lines 9-43 and line 51-col. 16, line 10) and channel number(s) “destination address” to various service provider(s) (col. 8, lines 30-43), which are packed at OC 202 and transmitted to each STT 220 via HE 208; note that OC 202 and HE 208 maintains address of each STT 220 (col. 28, lines 32-45 and col. 29, lines 26-40) and HE 208 further receives and processes requests from each specific STT 220 to met specific demands of each STTs 220, based on the requests received;

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the claimed “a broadband digital terminal receiving the packet over the private virtual channel from the broadcast source” is met by Headend (HE) 208 (col. 9, lines 3-7 and col. 34, line 60-col. 35, line 5) note that HE 208 acts as a network controller and receives requested programs from OC 202 via terrestrial link 218 and relays to STT 220 via a virtual channel;

The claimed “a set top box...” is met by Set top terminal (STT) 220 (col. 15, lines 9-43 and col. 29, line 62-col. 30, line 30) note that OC 202 and HE 208 maintains address of each STT 220 and HE 208 and each specific STT 220, and STT 220 requests for programs using the control program and the interactive Custom Menus received from OC 202 or HE 208 and STT 220 cooperates with HE 208 and OC 202 to establishes an impulse pay-per-view virtual channel (col. 24, lines 12-33) from terrestrial link 218, node 288 and fiber/coax link, extending from STT 220 and HE 208 over the virtual channel to broadcast source OC 202 at a channel number destination, the data path allowing interactive Custom Menus and the control program to be communicated in real-time between STT 220 and OC 202 (col. 17, lines 48-59 and col. 18, lines 1-16).

As to claim 6, Hendricks further discloses where the interactive video/data system comprises a television Screen for receiving video transmission from the STT 220 (col. 7, line 58-col. 8, line 3).

As to claim 7, Hendricks further discloses where the interactive video/data system comprises an optical network interface between HE 208 and STT 220 (col. 7, lines 8-14).

As to claim 8, the claimed "network interface device..." is met by Node 288 (col. 23, lines 35-49 and col. 24, lines 22-33), which is between HE 208 and STT 220.

Claim 9 is met as previously discussed with respect to claim 2.

As to claim 10, Hendricks further discloses where the OC 202 is also a local server HE 208 (col. 9, lines 3-7 and col. 10, lines 19-27).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 11, is rejected under 35 U.S.C. 103(a) as being unpatentable over **Hendricks et al (6,201,536)** in view of **Mimura et al (6,557,031)**.

As to claim 11, **Hendricks** further teaches receiving and packing various service provider video programs over various networks, such as, ATM network, Local networks, etc., and sending upstream request via telephone network or bi-directional fiber/coax communication link, but fails to explicitly teach where the broadcasting source is an Internet service provider.

However, note the **Mimura et al** reference teaches a network system that connects plurality of CATV networks 62 by Internet 50 and where STB 57 receives broadcast video from Video Server 60 via Internet 50 (figs. 9 and col. 8, lines 6-23).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Mimura into the system of Hendricks to connect the cable network to the Internet network and provide services to a wide area network.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hendricks et al (6,675,386) disclose apparatus for video access and control over computer network, including image correction.

Scott et al (6,338,094) disclose method, device and system for playing a video file in response to selecting a web page link.

Nam et al (6,138,163) disclose mediate server and real time delivery method between different networks.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

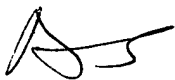
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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Annan Q. Shang** whose telephone number is **571-272-7355**. The examiner can normally be reached on **700am-500pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **John W. Miller** can be reached on **571-272-7353**. The fax phone number for the organization where this application or proceeding is assigned is **703-872-9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the **Electronic Business Center (EBC)** at **866-217-9197 (toll-free)**.



**Annan Q. Shang.**



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